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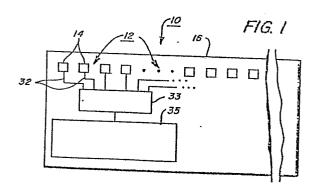
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54 Light-emitting diode array.

(57) Light-emitting diodes (LEDs) with supporting circuits on a chip or wafer for a full width array in which the chip is first coated with silicon dioxide to form a thin film layer, a plurality of holes corresponding in number and configuration to the desired array are next opened in the layer, gallium phosphide LEDs, together with p-n junctions and contact layers, are then grown epitaxially in the holes, and finally attendant LED operating circuits are epitaxially formed on the chip together with operative connections to the individual LEDs by integrated circuit techniques.





EUROPEAN SEARCH REPORT

Application number

EP 85 30 7912

Category	Citation of document wi of rele	Ith Indication, where appropriate, vant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)	
Y	GB-A-1 467 096 STEPANOVICH AKIMO * Whole document	ÒV et al.)	1,8	H 01 L 33/00 H 01 L 27/15	
A			4-6		
Y		2 - page 4, line nes 59-95; claims	1,8	,	
A	FR-A-2 080 849 RADIOTECHNIQUE-Co * Page 6, line 2: 12; figures 2-6	OMPELEC) 1 - page 10, line	1,4,7-		
A	FUJITSU SCIENTIF JOURNAL, vol. 19 September 1983, p Kawasaki, JP; T. al.: "High radia: LED array by MBE * Pages 317-318;	, no. 3, pages 315-322, SUGAHARA et nce AlGaAs DH	1,4,7,8,10	TECHNICAL FIELDS SEARCHED (Int. Ci. ⁴) H O1 L	
A	FR-A-2 197 297 (IBM CORP.) * Page 2, line 18 - page 4, line 18; claims 1,2,8; figures 1-4 *		1,7,8,		
	The present search report has b	een drawn up for all claims			
	Place of search THE HAGUE	Date of completion of the search 08-09-1987	VISE	Examiner NTIN A.	
Y: pr	CATEGORY OF CITED DOCU articularly relevant if taken alone articularly relevant if combined w ocument of the same category chnological background on-written disclosure	JMENTS T: theory o E: earlier p after the vith another D: docume L: docume	r principle under atent document, filing date nt cited in the ap nt cited for other	lying the invention but published on, or plication reasons	



EUROPEAN SEARCH REPORT

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	DOCUMENTS CONS	Page 2			
ategory	Citation of document with of relevants	h indication, where appro ant passages	opriate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
A	GB-A-2 085 227 (GLOEILAMPENFABRIE	NV PHILIPS' KEN)			
	GB-A-2 104 266 (INC.)	PITNEY BOWE	s		
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······································	Place of search	Date of completio	n of the search		Examiner
-	THE HAGUE	08-09-19		VISEN	TIN A.
Y: p	CATEGORY OF CITED DOCL articularly relevant if taken alone articularly relevant if combined w		T: theory or pri E: earlier pater after the filir D: document c L: document c	nt document. I	ying the invention but published on, or
A:te	ocument of the same category echnological background on-written disclosure itermediate document	document cited for other reasons member of the same patent family, corresponding document			